industrial and government animal-testing laboratories for more humane alternatives to the Draize test. Signs are now emerging in Washington that the coalition has been successful in catalyzing changes in federal policy—at least within the Environmental Protection Agency — for determining when and how to apply the test.

"It's a fairly inhumane test," admits EPA's Jim Roloff. Technicians hate to do it, he says, because "if you get a very corrosive chemical, it's really cruel."

Roloff says that pending results of a Consumer Product Safety Commission (CPSC) study, his agency may recommend anesthetizing rabbits during tests; it is hoped results of this study, expected to be released next month, will afford policymakers a feel for the degree to which anesthesia might invalidate test results. EPA is also considering limiting the need for eye tests. For instance, Roloff says, it is hardly necessary to test for eye irritancy once skin tests establish a substance as highly caustic; in these cases eye irritancy can be presumed.

Since August, EPA has banned in-house Draize testing. And except to support litigation, CPSC is still observing a ban it enacted in April. FDA also awaits CPSC results for its policy implications. □

Hyperactivity diet panned

The controversial Feingold diet, said to eliminate hyperactivity in children, last week received a failing grade from the Nutrition Foundation, an organization financed by 50 food or food-related companies. But the value of the diet is still undetermined.

In 1974, pediatric allergist Benjamin Feingold published *Why Your Child is Hyperactive,* an account of an additive-, coloring- and salicylate-free diet that he said was at least 40 percent successful in treating hyperactive children. The Nutrition Foundation reacted by commissioning a study to review the evidence connecting hyperactivity with food.

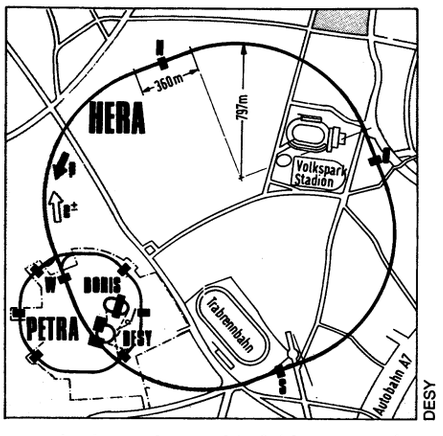
The panel, which reviewed independent and Foundation-sponsored studies, reports that "the studies already completed provide sufficient evidence to refute the claim that artificial food coloring, artificial flavoring and salicylates produce hyperactivity and/or learning disability." Since the diet is not harmful, they see no reason to discourage families interested in pursuing it, but the success of the diet is related to the placebo effect, they say.

The report drew immediate reaction. Feingold says that children generally ingest more food dye than was administered in the double-blind trials; the Center for Science in the Public Interest says the studies on which the panel reported were inconclusive. And Sanford Miller, director of the Bureau of Foods and Drug Administration, says that there is still not enough evidence to reach a conclusion. □

HERA in Hamburg: A goddess of physics

The future of particle physics in Europe appears to be based on two projected pieces of experimental apparatus, the Large Electron-Positron colliding beam facility (LEP) (SN: 1/20/79, p. 42) and now HERA, a machine for colliding beams of accelerated protons with beams of either electrons or positrons. These two choices have been recommended by the European Committee on Future Accelerators (ECFA), which represents physicists from most of the non-socialist countries. So confident are the physicists that their governments will accept ECFA's recommendations that they are meeting Oct. 24 and 25 in Munich to discuss what experiments they will want to do with HERA.

HERA is projected for the Deutsches Elektronen-Synchrotron laboratory (DESY) at Hamburg. According to the current plans, protons will be brought to a maximum energy of 820 billion electronvolts (greater than in any existing proton accelerator) before they are penetrated by an electron or positron coming in the opposite direction. It is hoped thereby to achieve extremely deep penetration and study the nature and doings of the quarks and the force that holds the quarks together in the proton's very small volume. A report in the DESY JOURNAL even expresses a hope of disintegrating the quarks contained in the proton *(die im Proton vorhandenen Quarks zu zertrümmern).*



HERA's *planned tunnel is 6.4 km around.*

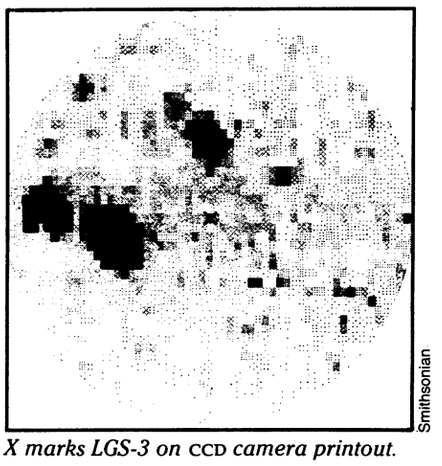
HERA's storage rings are projected to lie in a squared-off circle, 6.4 kilometers around. The site plan locates the circle adjacent to DESY's present site in the suburbs of Hamburg. The HERA rings would enclose both a sports stadium and a trotting racetrack with space left over. Some U.S. physicists express the opinion that HERA may never be built for the same political and budgetary reasons that have put American accelerator building plans into a kind of Sargasso Sea, but it is the response of the European governments that will tell. DESY's past speed record for building these things has abraded the nerves of not a few Americans. □

LGS-3: A far out satellite galaxy

Sometimes you can't see the trees for the forest. This is especially true if the forest is a sky full of bright attention-getting objects, and the tree is a dwarf galaxy intrinsically no brighter than a single supergiant star and apparently only one percent brighter than the background glow of an ideal night sky. Such a one is LGS-3, which may be the most distant member of the local subgroup of galaxies, the satellites of the Milky Way.

LGS-3 was discovered in 1978 by astronomers working at Palomar Mountain. It is so faint that it could not be studied intensively by photographic methods. Astronomers of the Smithsonian Astrophysical Observatory decided to try the relatively new charge-coupled devices (CCD's), electro-optic sensors that generate digital information in response to light falling on them and put the information into a computer's memory. The CCD camera was put on the 61-inch reflecting telescope on Mt. Hopkins in Arizona.

This technique obtained data that could be analyzed to learn some details about LGS-3. The analysis was done by Rudy Schild of the Smithsonian. He found that LGS-3 contains a large population of red stars that seem to have a luminosity characteristic of the red giant stars found in globular clusters near our galaxy. On this assumption Schild can calculate the distance of these stars to be 720,000 light-years. This distance raises the question whether LGS-3 is gravitationally bound to our Milky Way or to the nearest other subgroup, M33. The distance and the apparent luminosity of the whole galaxy gives an intrinsic luminosity no larger than a single supergiant star. Nevertheless, it takes about 300,000 dim old red giants to produce that brightness. □


Smithsonian

X marks LGS-3 on CCD *camera printout.*